NONPOINT SOURCE GRANTS SUMMARY

DEP FFY99 Maine NPS Grants Program

12/14/99 Marcotte, MDEP

In 1999, DEP issued 31 grant contracts for NPS projects totaling about $1,805,000 in grant funds. Funding sources were sections 319(h) & 604(b) of the Federal Clean Water Act & the 1998 State Bond.

PROJECT INFORMATION	AMOUNTS
#99-01, "Sheepscot Watershed Project, Phase II" Sponsor: Sheepscot Valley Conservation Association Purpose: To establish conservation easements to protect riparian areas critical to salmon fisheries; promote adoption of best management practices; develop and broaden local awareness and participation in protecting the Sheepscot River watershed; and implement conservation actions contained in the Maine Atlantic Salmon Conservation Plan for reducing NPS pollution. Planned Duration: 24 months	grant $80,350 match $64,400 total $144,750 grant source: fed 319 Marcotte
#99-02, "Kettle Cove Neighborhood Subwatershed Project" Sponsor: Portland Water District Purpose: To reduce NPS pollutant loading in the Kettle Cove watershed, and to encourage (through demonstrations) the use of best management practices by other subwatersheds around Sebago Lake. Planned Duration: 30 months	grant $47,425 match $46,837 total $94,262 grant source: fed 319 Ladd
#99B-03, "Damariscotta Lake Watershed Management Plan" Sponsor: Damariscotta Lake Environmental Association Purpose: To protect the water quality of Damariscotta Lake from the negative influences of NPS runoff by defining specific objectives and actions that will reduce NPS problems from existing and future development. Planned Duration: 18 months	Grant $56,825 Match $26,934 total $83,759 grant source: state bond Waddell
#99B-04, "Thompson Lake Watershed Management Plan" Sponsor: Thompson Lake Environmental Association Purpose: To develop a comprehensive, locally supported strategy to protect Thompson Lake from the effects of NPS pollution to the greatest extent possible; to maintain a stable or decreasing trophic state for Thompson Lake; and to help mitigate existing NPS problems while minimizing the impact of future NPS sources. Planned Duration: 18 months	Grant $25,362 Match $13,600 total $38,962 grant source: state bond Hahnel
#99-05, "Cold Stream Pond Watershed Survey and BMP Demonstrations" Sponsor: Penobscot County Soil and Water Conservation District Purpose: To survey the Cold Stream watershed and determine what NPS problems need to be addressed to preserve the lake's water quality; to promote use of conservation measures and development of local stewardship; and to use BMP demonstrations as a promotional tool for soil and water conservation while reducing NPS pollutants. Planned Duration: 24 months	grant $27,600 match $25,760 total $53,360 grant source: fed 319 Libbey
#99-06, "Leachate Control for Field Stacking of Manure" Sponsor: Androscoggin Valley Soil and Water Conservation District Purpose: To demonstrate the risks involved with manure stockpiles and to test a practical and effective method for capturing nutrient leachate and runoff that that may be adopted as an approved BMP and used on farms throughout Maine. Planned Duration: 30 months	grant $37,914 match $25,276 total $63,190 grant source: fed 319 McGlauflin

#99-07, "Timber Harvesting BMP Demo Area" Sponsor: University of Maine Purpose: To promote greater public awareness of forestry best management practices and to encourage use of BMPs by loggers, landowners, and forest industry by constructing a BMP demonstration site in southern Maine. This site will compliment a similar site under construction in central Maine (UMaine, Orono; see project #95-21). Planned Duration: 24 months	grant $31,694 match $26,148 total $57,842 grant source: fed 319 St.Peter
#99-08, "Mousam Lake Watershed BMP Demonstrations" Sponsor: York County Soil and Water Conservation District Purpose: To reduce the nonpoint source soil and phosphorus load to Mousam Lake in the long term, through stormwater management at priority road sites and BMP demonstrations around the lake. The intent is to motivate the lake community to support future similar efforts. Planned Duration: 24 month	grant $21,184 match $14,123 total $35,307 grant source: fed 319 Ladd
#99-09, "Crescent Lake Watershed Survey" Sponsor: Town of Raymond Purpose: To expand citizen and town awareness of watershed protection issues arising from the Raymond Pond Watershed survey; identify and prioritize soil erosion and phosphorus pollution sites in the Crescent Lake watershed; make recommendations for correcting these problems; and to improve the watershed database for BMP demos. Planned Duration: 12 months	Grant $7,183 Match $4,806 total $11,989 grant source: fed 319 Kale
#99-10, "Branch Lake BMP Demonstration Project" Sponsor: Hancock County Soil and Water Conservation District Purpose: To demonstrate to watershed residents and city officials the appropriate best management practices for reducing sediment and nutrient inputs to Branch Lake, and to raise public awareness of water quality problems associated with NPS pollution. Planned Duration: 24 months	Grant $26,465 Match $22,775 Total $49,240 Grant source: fed 319 Libbey
#99-11, "Turner Ponds Demonstration Project" Sponsor: Androscoggin Valley Soil and Water Conservation District Purpose: To watershed residents, town citizens, and town officials about appropriate conservation practices which can be used to protect water quality, and to demonstrate their effectiveness. Planned Duration: 24 months	Grant $33,429 match $22,397 total $55,826 grant source: fed 319 Hahnel
#99B-12, "Great Pond Watershed Management Plan Development Project" Sponsor: Belgrade Regional Conservation Alliance Purpose: To create a plan for stabilizing and improving water quality throughout the Great Pond watershed; to focus the municipalities in a coordinated effort to protect the lake's water quality; and to educate watershed residents in the benefits of water quality protection. Planned Duration: 18 months	grant $94,419 match $20,162 total $114,581 grant source: state bond ME Dennis
#99-13, "Watershed Surveys of Nonpoint Sources in the Narraguagus and Pleasant Rivers" Sponsor: Project SHARE Purpose: The purpose of this project is to: (1) Conduct NPS surveys of the Pleasant and Narraguagus River watersheds to identify important NPS pollution sources; (2) Build local support for a community based watershed management project through greater community awareness with the watershed councils; and (3) Protect Atlantic Salmon habitat. Planned Duration: 12 months	grant $46,420 match $31,700 total $78,120 grant source: fed 319 Libbey

#99-14, "Allen Pond NPS Demonstration Project" Sponsor: Androscoggin Valley Soil and Water Conservation District Purpose: To demonstrate to watershed residents the water quality best management practices (BMPs) for controlling NPS pollution, and to encourage the use of conservation practices to protect Allen Pond. Planned Duration: 12 months	grant $15,753 match $10,568 total $26,321 grant source: fed 319 Hahnel
#99-15, "Porter Lake Watershed Survey" Sponsor: Franklin County Soil and Water Conservation District Purpose: To identify all sources of NPS pollution in the watershed; to reduce NPS pollution by educating lake association members, landowners, town officials, road crews, and the general public; and to assess overall water quality in Porter Lake. The project will act as a base for preparing a Watershed Management Plan. Planned Duration: 12 months	grant $6,062 match $7,553 total $13,615 grant source: fed 319 Hahnel
#99-16, "Norway Lakes Protection BMP Demonstrations" Sponsor: Androscoggin Valley Council of Governments Purpose: To educate the public in NPS pollution issues using workshops, outreach, and BMP demonstrations; and to provide technical assistance to property owners, road crews and contractors to help them understand and support use of BMPs for lake protection. Planned Duration: 24 months	grant $39,000 match $26,000 total $65,000 grant source: fed 319 Ladd
#99B-17, "No Name Pond Watershed Mgt. Plan Development" Sponsor: City of Lewiston Purpose: To create a Watershed Management Plan to help protect No Name Pond from further declines in water quality resulting from land use activities associated with nutrients/NPS pollutants. Planned Duration: 12 months	Grant $17,450 Match $6,475 total $23,925 grant source: state bond Ladd
#99B-18, "China Region Watershed Management Project" Sponsor: China Region Lake Alliance Purpose: To continue implementation of a locally-supported multi-jurisdictional lake water quality improvement program, based on established and accepted watershed management practices and regulatory mechanisms, to achieve widespread implementation of best management practices. Duration: 24 months	Grant $96,800 Match $190,600 total $287,400 grant source: state bond Hahnel
#99P-19, "Androscoggin River Watershed Organization and Fifth Conference" Sponsor: Androscoggin Valley Council of Governments Purpose: To facilitate formation of an Androscoggin River Watershed "Council", and to introduce the Council to a broad range of stakeholders and citizens through the fifth Androscoggin River Watershed Conference. Duration: 12 months	Grant $6,500 match $8,336 total $14,836 grant source: fed 604b Mower
#99P-20, "Royal River Watershed Municipal Participation & Planning Project" Sponsor: Cumberland County Soil and Water Conservation District Purpose: To generate a locally-supported implementation plan for the Royal River watershed, to help achieve the ultimate goal of protecting and improving water quality in the watershed. Duration: 7 to 12 months	grant $7,559 match $5,107 total $12,666 grant source: fed 604b, Kale
#99P-21, "Pleasant Pond Water Quality Project" Sponsor: Southern Aroostook Soil and Water Conservation District Purpose: To write a final report for the existing watershed survey, inform landowners and encourage BMPs installations on shorefront property (including demonstrations), conduct outreach (newsletters, mailings, meetings) to gain more local support, and develop an application to obtain funding to implement survey recommendations. Duration: 12 months	Grant $7,900 match $0 total $7,900 grant source: fed 604b Hoppe

#99P-22, "Long Lake Watershed Survey - Phase I" Sponsor: Town of St. Agatha Purpose: To conduct the first of a three-phase watershed survey; raise local awareness of NPS causes and solutions; involve residents in the survey process; provide residents information about local land uses and pollution sources; and provide recommendations to residents for minimizing NPS pollution in Long Lake using Best Management Practices. Duration: 12 months	grant $9,600 match $900 total $10,500 grant source: fed 604b Hoppe
#99P-23, "Embden Lake Watershed Survey" Sponsor: Somerset County Soil and Water Conservation District Purpose: To develop local support, commitment and resources for conducting a watershed survey; train Embden Pond Association volunteers in survey techniques; inform residents about NPS pollution and remedies; prioritize pollution problems; and document survey findings and recommendations for using BMPs for NPS control. Duration: 12 months	grant $5,511 match $2,352 total $7,863 grant source: fed 604b ME Dennis
Note: Projects #99-24 through #99-27 are DEP in-house projects. **#99-24**, NPS Training and Resource Center, $60,000 **#99-25**, NPS Information and Education, $40,000 **#99-26**, USGS Gauge, $10,000 **#99-27**, NPS Biomonitoring, $6,725	
#99B-28, "Highland Lake Watershed Implementation Project" Sponsor: Cumberland County Soil and Water Conservation District Purpose: To improve or maintain stable water quality and reduce symptoms of eutrophication in Highland Lake. This will be accomplished by installing conservation measures to reduce the amount of sediment and phosphorus entering the lake; continuing to monitor water quality,: and promoting watershed stewardship. Duration: 36 months	grant $206,975 match $146,235 total $353,210 grant source: state bond Kale

NPS Projects Funded with Incremental Federal section 319(h) Monies

In 1999 DEP received 1.1 million dollars more than previous annual 319 awards because of new federal appropriations under the Clean Water Act. The Federal Clean Water Action Plan, February 1998, calls for increased actions to restore water quality. A central aspect of the plan is its set of actions that are designed to promoted a renewed focus to (1) identify watersheds with the most critical water quality problems, and (2) work together to focus resources and implement effective strategies to solve these problems. EPA directed States to use these new additional 319 funds to conduct projects to achieve demonstrable water quality improvements or restorations of waters as rapidly as possible.

#99-R-29 Cobbossee Lake Restoration by Reduction of Phosphorus in Jock Stream

Problem: Cobbossee Lake fails to attain Class GPA standards due to use impairment caused by annual blue green algal blooms. Elevated phosphorus levels from Jock Stream comprise about 1/3rd of the phosphorus load to the lake.

Goal: Abate sediment and phosphorus export from agricultural land and roadways in the Jock Stream watershed. Reduce phosphorus in Jock Stream to increase water clarity and reduce the magnitude and duration of algal blooms in Cobbossee lake. The TMDL report (1995) set a phosphorus loading goal of 1500 Kg/yr for Jock Stream. Climatic variations influence annual water runoff, therefore, the load is translated to a volume-weighted average annual goal of 55 ppb phosphorus concentration in Jock Stream.

Solutions: Abate watershed export of phosphorus attached to sediment by adopting improved livestock agricultural BMPs, i.e. manure storage facilities; heavy use area protection; nutrient management; cropland erosion control; livestock exclusion fencing & alternative water supplies; streambank stabilization and roadside drainage BMPs

Monitoring: Quantitatively evaluate phosphorus reduction and classification attainment status (dissolved oxygen, bacteria) in Jock Stream and continue lake trophic state monitoring (phosphorus, chlorophyll A, dissolved oxygen, transparency).
Sponsor: Kennebec County SWCD & Cobbossee Watershed District
Duration: Phase I, 3 years of BMPs implementation and monitoring; Phase II, 3 years of post-implementation monitoring.
Cost Estimates: phase I – 319 grant, $220,040; total with match $344,000,

#99R-30 Water Quality Restoration on the West Branch of the Sheepscot River

Problem: The West Branch fails to attain Class AA standards for dissolved oxygen and bacteria. Atlantic Salmon populations have declined within the entire Sheepscot river, in part, due to sedimentation of spawning habitat areas, high water temperatures and other habitat factors. Atlantic Salmon in the Sheepscot river are managed as a "threatened species" to promote recovery under the Maine Atlantic Salmon Conservation Plan.
Goal: Restore water quality the West Branch to attain AA classification and support high quality aquatic habitat for indigenous species, including Atlantic salmon.
Solutions: Identify sources of sediment, nutrients, and bacteria in the watershed and inadequate riparian areas; provide technical and cost sharing assistance to prompt installation of roadside runoff BMPs to abate sedimentation; protect or restore riparian buffers; prompt installation of agricultural BMPs with USDA-EQIP or 319 funds; work with town CEOs to abate residential nonpoint sources.
Monitoring: SVCA will continue water classification attainment monitoring and conduct localized monitoring to determine other important pollutant sources and demonstrate water quality response to installation of BMPs at 1 or 2 key sites nested within the watershed.
Sponsor: Kennebec County SWCD; Sheepscot Valley Conservation Asso.
Duration: Phase I, 3 years of BMPs implementation and monitoring; Phase II, 3 years of post-implementation monitoring.
Cost Estimates: Phase I - 319 grant 319 $254,070; total with match $413,000

99R-31 Frost Gully Brook Watershed Retrofit Project (Phase I)

Problem: Brook fails to meet Class A standards for dissolved oxygen, bacteria, and aquatic life (benthic macroinvertebrates). Habitat assessment documents excessive sediment deposition and unstable streambanks caused by increased runoff from an rapidly urbanizing area. Bacteria in runoff threatens "open" status of shellfish harvest area in the Harraseeket River Estuary.
Goal: Attain Class A standards in brook, reduce pollutant loading to brook & estuary
Solutions: Install stormwater detention basins at 3 locations and retrofit 1 existing basin in downtown village area with a design objective of maximizing pollutant removal and reducing peak flows. Implement actions to achieve bacteria source reduction in the town, such as pet controls and street sweeping.
Monitoring: classification attainment monitoring, (DO, bacteria, benthic macroinvertebrate) storm event streamflow and pollutant load comparisons
Sponsor: Cumberland County SWCD & Town of Freeport
Duration; Phase I, 1 year, BMP designs, easements, and WQ monitoring; Phase II, 2 years, BMP implementation & WQ monitoring; Phase III, 3 years for post implementation monitoring
Cost Estimates: Grant phase I, $68,000, total with match $108,759; Phase II grant estimate $277,923.

99R-32 Meduxnekeag River Restoration Project - Phase I

Problem: A 6 mile segment of the river fails to attain class B standards for dissolved oxygen (TMDL Report 1997) due to nonpoint sources and 2 licensed point sources. High phosphorous levels cause prolific attached algal growth especially in the Lowery Covered Bridge area. The algae appears in long stringy strands in many prime fishing areas. This algae impairs fishing. Bacteria measured in 5 brooks

(1994 to 1997) near the river indicate nutrient loads in the brooks are an important part of the cause of the nonattainment in the river. The source of the bacteria and nutrients in the brooks appears to be runoff from livestock farms.
Goal: Help restore the water quality in the 6 mile segment of the Meduxnekeag river and improve water quality in 5 brooks that outlet into the river segment.
Solutions: Provide technical and cost sharing assistance to abate nutrient export from livestock farms within the brook watersheds by prompting installation of appropriate agricultural best management practices on the farms in the 5 brook watersheds.
Monitoring: Water quality monitoring will be conducted to (1) assess classification attainment of the river and brooks, and (2) assess the pollutant load reduction and changes to water quality in Henderson and Hill Farm Brooks due to adoption of BMPs**.**
Sponsor: Southern Aroostook SWCD & Meduxnekeag Watershed Coalition
Duration: phase I (2 years) & II (1 year) for BMPs implementation & monitoring; Phase III (3 years) for post implementation monitoring.
Cost Estimates: Phase I, grant $174,505; total with match, 291,770. Phase II grant estimate $110,000.

99R-33 Nonpoint Source Education for Municipal Officials (NEMO)

Problem: Pollution from stormwater runoff has been identified as the most significant cause for non-attainment for Casco Bay Watershed's lakes, riverine, marine and estuarine waters (State of Maine 1996 Water Quality Assessment). NPS pollution results from the cumulative, incremental impacts of individual behaviors and local land use policies.
Goal: Project will test the utility and costs of targeted educational delivery methods to prompt communities to use BMPs to protect their water resources.
Solutions: Implement a NPS educational program for a targeted audience of local land use officials. The NEMO program was developed in Connecticut. The program will help them understand the nature of the problem and its impact on their lives, town and natural resource base; therefore, enabling them to plan for growth while addressing water quality through educated land use decisions. Encourage and establish collaborative relationships among regional and state agencies and land management-related organizations. Support the goals of the Casco Bay Estuary Project and the state NPS program. The pilot area will be Freeport and Gorham.
Sponsor: Cumberland County SWCD
Duration: 1 year
Cost Estimate: grant, $85,000; total with match, $164,656

99R-34 Tannery Brook Water Quality Assessment

Problem: Excess sediment loads, nutrients, elevated temperature, and increasing stream flows from an urban area (Gorham) has caused a decline in the brook trout fishery and habitat conditions. A dam and impoundment in the brook has reduced trout habitat.
Project Goal Quantitatively define the water quality problem and develop preliminary plans to implement actions to restore the brook and possibly remove the dam and impoundment.
Monitoring: Monitoring will document existing brook conditions
Sponsor: Cumberland County SWCD & University of Maine
Duration: 1 year
Cost Estimate: grant, $26,016; total with match $47,380

99R-35 Develop Periphyton Biological Indicators for WQ Assessment –Phase I

Problem: Maine needs better assessment tools for discerning stream impairments caused by algae and excessive plant growth. Algal indicators may be an extremely useful tool in the development of point and

NPS nutrient TMDLs. Algal biomass measures are commonly better correlated with public perceptions of problems than actual nutrient concentrations in streams.
Goal: Develop periphyton and macroscopic benthic algae biological indicators, to complement the existing use of benthic macroinvertebrates, to provide information about river and stream biological condition.
Sponsor: DEP
Cost Estimate: Grant $20,000.

99R-36 Ecosystem-level Effects of Roadway Runoff on Headwater Streams in Maine

Problem: Water quality monitoring indicated that Goosefare Brook in the vicinity of the Maine turnpike does not attain the applicable standard for support of aquatic life. In 1997, DEP funded a study of the stream to determine the cause. Possibilities included the turnpike and two industrial sites. The study revealed that while the majority of the pollution stress appeared to be coming from the industrial stormwater, the turnpike was also causing a decline in the health of the stream.
Goal: Develop an assessment protocol using stream ecosystem parameters to help estimate the impact of roadway runoff pollutants on small streams to help develop TMDLs. Provide recommendations for mitigation of water quality impacts associated with current and future highway systems.
Sponsor: University of Maine and DEP
Duration: 2 years
Cost Estimate: $45,836 total with match $67,362

Stream Team Pilot Program

Establish Stream Team Program in the Casco Bay Estuary Project Watershed. The program is modeled after the Missouri program which provides information, coordination, training and recognition services to foster development of locally-based volunteer "stream team" stewardship organizations. DEP plans to convert this pilot project to a statewide Stream Teams program if the program is successful in Casco Bay.
Sponsor: DEP
Duration: 1.5 years
Cost estimate: grant $51,775